

REMARKS

Claims 1 through 26 continue to be in the case.

New claims 27 and 28 are being introduced.

Claim 27 is based on the language of claim 15.

New claim 28 is based on claim 6.

Claim 15 is amended to be in independent and fully allowable form.

The Office Action mailed on March 11, 2004 refers to Claim Rejections - 35 USC § 103.

2. Claims 1-14, 20 stand rejected under 35 U.S.C. 103(x) as being unpatentable over Kaga et al. (U.S. Patent No. 5,609,781).

Kaga et al. teach a device comprising a pressure flow generator (see Fig. 38-42), an automatic control unit (20), a supply capillary connected to a high frequency current supply device e.g. gas (see Fig. 38-42) and a separating nozzle having a circular cross section (2). The nozzle is disposed fixedly positioned and coaxial with the supply capillary (see Fig. 38-42); further, the nozzle includes at least one twisted groove, wherein the number of twisted grooves and the diameter and the length of the nozzle channel are placed in such a ratio to each other that the separating jet subjected to

pressure is rotated (see Fig. 1013, 10C, 11A and 11 B). Kaga et al. have all the features of the invention but Kaga et al. failed to teach a water jet device and the slope of the spiral flutes is dimensioned larger than the diameter of the nozzle channel and wherein the spiral flutes exhibit a slope angle of from about 30 to 45 degrees. It would have been obvious to one having ordinary skills in the art at the time the invention was made to substitute gas jet for water jet for dispensing. Furthermore, it would have been obvious to one skilled artisan in the art to have the slope of the spiral flutes is dimensioned larger than the diameter of the nozzle channel and wherein the spiral flutes exhibit a slope angle of from about 30 to 45 degrees to achieve a better flow and the jet is subjected to a rotating pressure.

Applicant is presently working on a more detailed distinction between applicant's claims and the Kaga et al. reference.

Kaga et al. have all the features of the invention but Kaga et al. do not mention specifically the hollow cylinder of the nozzle has a length of an inner cylinder which is from about 1 to 5 times the diameter of the inner cylinder, the width of the spiral grooves in 0.08-0.2 times the diameter of the inner cylinder of the nozzle and the depth of the spiral grooves is 0.2-0.4 times the width of the spiral grooves. It would have been obvious matter of

design choice to have the hollow cylinder of the nozzle has a length of an inner cylinder which is from about 1 to 5 times the diameter of the inner cylinder, the width of the spiral grooves in 0.08-0.2 times the diameter of the inner cylinder of the nozzle and the depth of the spiral grooves is 0.2-0.4 times the width of the spiral grooves to have the appropriate ratio between the length of the nozzle and the grooves so that when the jet exiting the nozzle, it swirled.

Applicant is noting the assertions of the Office Action and is presently preparing a more detailed response.

The Office Action refers to Allowable Subject Matter.

3. Claims 15-19 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The present amendment places claim 15 in fully independent form, which should render claims 15 through 19 fully allowable.

4. Claims 21-26 are allowed.

Applicant is gratefully acknowledging the allowability of claims 21 through 26. The Office Action refers to Response to Arguments.

5. Applicant's arguments filed February 06, 2004 have been fully considered but they are not persuasive. The claims have been addressed in the above paragraphs.

The Examiner does not recognize "the gas mixture performs any cutting operation" cited in the claims. The claimed invention teaches an apparatus having a nozzle with grooves so that when the gas exiting the nozzle, it rotates. Kaga et al. teaches an apparatus that performs the same function.

Applicant respectfully disagrees.

The present application does not have a gas exiting the nozzle but a jet of liquid water suitable for separating biological structures. In contrast Kaga et al teaches a mixing of two different streams of air. Thus the present invention has very little in common with the Kaga et al reference.

To further emphasize the difference to Kaga et al., a new claim 28 is being introduced, where the formation of a water jet is specified to distinguish over the gas mixture preparation of Kaga et al..

Reconsideration of all outstanding rejections is respectfully requested.

All claims as presently submitted are deemed to be in form for allowance and an early notice of allowance is earnestly solicited.

Respectfully submitted,

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